NOTES ON AUSTRALIAN CUCKOOS.

I HAVE been long interested in the forms and nomenclature of Australian Cuckoos, and have already published some notes regarding the latter (Nov. Zool., Vol. XVIII., p. 16, 1911). Since then I have gone more fully into this matter, and find that a general revision is necessary both as regards the generic and specific names and the forms recognisable. I herewith attempt such a revision, with the hope that criticism and co-operation will later enable me to deal more completely with the problems here indicated.

In the Australian Museum Special Catalogue No. I., Vol. III., A. J. North recently dealt with this group, and the facts as I read them, unfortunately compel me to differ from his conclusions.

Firstly, to deal with the generic names: In my Handlist I admitted as genera *Cuculus*, *Cacomantis*, *Mesocalius*, *Chalcococcyx*, and *Eudynamis*. I do not propose here to touch upon the aberrant forms *Scythrops* and *Centropus*. North did not review the whole of the species admitted as Australian, but only wrote upon those that interested him from an oological point of view. He did not discuss the generic status, though entering into details regarding specific names.

I recognised two species as referable to the genus *Cuculus* and three to *Cacomantis*. Upon comparison I could not separate the members of the latter genus save by slight difference in size and coloration, which I do not consider to be generic characters. It will be noted that a species which, following the Cat. Birds Brit. Mus., I classed in *Cuculus*, was considered by that most accurate ornithologist Count Salvadori, to be a member of the genus *Cacomantis*, and for it alone a genus *Heteroscenes* had been instituted by Cabanis (Mus. Hein., Vol. IV., p. 26, 1862). When a connecting link exists, so that the limits of a colour genus cannot even be maintained, I feel justified in advocating its rejection. Moreover in the genus *Cacomantis* the

members differ quite as much among themselves as from other species which are classed in *Cuculus*. I am therefore referring the Australian species hitherto classed in *Cacomantis* to the genus *Cuculus*.

In my Handlist I accepted the genus *Mesocalius* and species *palliolatus* Latham.

This is an interesting case and the facts are simple : In the Mus. Hein., Cabanis proposed numerous new genera without giving diagnostic features, simply relying upon the species named. On p. 16 he gave :

Gen. *Misocalius* Nob.
Chalcites Gould, 184? and Bp., 1854 (nec Less, 1831).
M. palliolatus Nob.
Cuculus palliolatus Lath.

and then included in its synonymy *Chalcites osculans*, Gould (Proc. Zool. Soc. [Lond.], 1847, p. 32). As no other species was included, the type of *Misocalius* (by monotypy) must be regarded as *Cuculus palliolatus*, Lath. This species is indeterminable (at present) and therefore I conclude the genus name must be rejected. It may be argued that Cabanis founded his genus on *Chalcites osculans* Gould, which he identified with Latham's account of his *Cuculus palliolatus*, and that therefore the genus name *Misocalius* should be retained for the *Chalcites osculans* Gould. The only logical conclusion is however, that inasmuch as Cabanis based his genus on Latham's *Cuculus palliolatus* without giving a generic diagnosis, there is no valid reason for accepting the generic name for a bird he deemed synonymous. I consider the safest course in this case is to ignore *Misocalius* and, therefore, propose the new generic name

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for *Chalcites osculans* Gould, of which genus it is the type and only species.

For the Bronze Cuckoos I employed *Chalcococcyx*, following the Handlist of Birds, whereas North has used *Lamprococcyx*.

The history of the generic names of the Bronze Cuckoos is worthy of record.

In the Isis, 1826, p. 977, Boie proposed *Chrysococcyx* for *Cuculus cupreus* Lath., u.a. Whatever the limits of Boie's genus may have been, the type of the genus by monotypy is *Cuculus cupreus* Latham. In the Cat. Birds Brit. Mus., Vol. XIX., p. 280, the type of *Chrysococcyx* is given as *C. cupreus*, but there *C. cupreus* is used as of Boddaert. Boddaert's *C. cupreus* is a different bird from Latham's *C. cupreus*, the latter being the bird later named *C. smaragdineus* by Swainson (Birds West Africa, p. 191, 1837). Consequently the type of *Chrysococcyx* Boie is *C. cupreus* Latham (nec Boddaert) = *C. smaragdineus* Swainson. Recently Reichenow (Ornith. Monatsb., p. 54, 1896), overlooking the difference between Latham's *C. cupreus* and Boddaert's *C. cupreus*, proposed for the former (= *C. smaragdineus* Swainson) the new generic name *Metallococcyx*. This has been recognised, but it must fall as an absolute synonym of *Chrysococcyx*.

In the Traite d'Ornith., Lesson proposed a race name *Chalcites* (p. 152, 1830) for the Shining Cuckoos. This name has often been used in connection with the Australian Bronze Cuckoos, inasmuch as the bird called *Cuculus chalcites* by Temminck and included by Lesson, was supposed to be a young bird belonging to this group.

However, *Chalcites* was only proposed by Lesson as a race-name, and therefore it is inadmissible as a generic name from that introduction. I base this conclusion upon Article 2 of the Code which reads : " The scientific designation of animals is uninominal for subgenera and all higher groups, binominal for species and trinominal for subspecies."

This forbids the recognition of sectional and race-names of a value intermediate between species and subgenera. That Lesson's race-names must be ignored is certain, inasmuch as Lesson used genera, subgenera, and races : thus he would divide his genus into subgenera for which he gave Latin alternative names scarcely without

exception, and then oftimes subdivide a large subgenus into races for which he rarely proposed Latin names, though occasionally quoting the Latin names which other authors had introduced as genera, which genera he had degraded to races.

The first introduction of *Chalcites*, in a generic sense, I can trace is that by Swainson (Classif. Birds, Vol. II., p. 322, 1837) when two species only are named—*C. auratus* and *vaillantii*. As the latter at this time was a nude name only, the type of *Chalcites* by monotypy must be *C. auratus*, which is a synonym of *C. cupreus* Boddaert. Therefore *Chalcites* Swainson, 1837, becomes an absolute synonym of *Lampromorpha* Vigors, 1831, which is the next name to be considered.

Lampromorpha was introduced by Vigors (Proc. Zool. Soc. [Lond.], 1831, p. 92) in connection with the new species *Lampromorpha chalcopepla*. Inasmuch as this is the only species named, it must be accepted, by monotypy, as the type of the genus *Lampromorpha*. A footnote at the place quoted reads : " A group including the Shining Cuckoos of Africa, India, and New Holland, indicated in the Transactions of the Linnean Society, Vol. XV., p. 300, Mr. Vigors expressed his belief of having lately seen a name attached to this group by some modern author ; but he could not call to his recollection the work in which it occurred." At the place given Vigors and Horsfield, treating of Australian birds, diagnosed a section, and under the first species named *Cuculus variolosus*, wrote : " There are six or seven species of *Cuculus* belonging to Australia and Africa, which form part of the same section of the group, and which differ from the bird before us only in their colours being bright and metallic . . ." The other species included are *C. lucidus* and *C. metallicus*. The species *C. variolosus* is now considered a member of the group *Cacomantis*.

Therefore, if the African Cuckoos are divisible into two groups, *Chrysococcyx* Boie must be used for the *C. smaragdineus* Swainson group, and *Lampromorpha*

Vigors for the *C. cupreus* Boddaert group, as *Lampromorpha chalcopepla* Vigors is a synonym of this latter species.

In the List Genera Birds, 1840, p. 57, Gray correctly indicated *C. cupreus* Lath. as the type of *Chrysococcyx* Boie, with which he synonymised *Chalcites* Less. and *Lampromorpha* Vigors.

In the Consp. Vol. Zygod, p. 7, 1854, Bonaparte used *Chalcites* Less. for *osculans*, *basalis* (= *chalcites*), and *lucidus*, *Chrysococcyx* Boie for African Bronze Cuckoos, *Lampromorpha* Vig. for *plagosus* and *xanthorhynchus*. It would appear that Bonaparte placed either *lucidus* or *plagosus* without knowing them, as they never can be separated generically, however much genus-splitting may be done.

In the Cat. Gen. Subgen. Birds, p. 96, 1855, Gray included

Chrysococcyx as noted above in 1840, and added

——*? Chalcites* Pr. B., 1854, nec Less., *C. osculans* Gould,

——*? Lampromorpha* Pr. B., 1854, nec Vig., *C. plagosus* Lath.

The next attempt to deal with Cuckoos was that by Cabanis in the Mus. Hein., Vol. IV., 1862. On p. 8, *Chrysococcyx* is properly restricted to *C. smaragdineus*, as synonyms being given *Chalcites* Less., 1831, and *Lampromorpha* Vigors, 1831. On p. 11, *Lamprococcyx* is introduced for the group noted above by Gray as *Lampromorpha* Bp., 1854 (nec Vig., 1831), and therein included *L. cupreus* (= *cupreus* Boddaert), *L. klaasi*, *basalis*, and *lucidus* (inc. *plagosus*). Gray had indicated, as type of his unnamed group, *C. plagosus*, and as Cabanis considered that synonymous with *C. lucidus*, he (Cabanis) designated the latter species as type of his new group.

In the Orn. Papuasia e Mol., Vol. I., 1880, Salvadori very thoroughly worked through the Papuasian Cuckoos, and therein recognised *Lamprococcyx* with type *L. lucidus* as available for the Austral-Malayan Bronze Cuckoos. In the Cat. Birds Brit. Mus., Vol. XIX.,

Shelley monographed the Cuckoos and belittling or disregarding Count Salvadori's painstaking work, enveloped these birds in almost hopeless confusion. The nomenclature there adopted was followed in the Handlist of Birds and by myself, and is responsible to some extent for the numerous changes now necessary.

In that place, for the Australian Bronze Cuckoos *Chalcococcyx* was utilised, while *Lamprococcyx* was synonymised with *Chrysococcyx*, *C. cupreus* Boddaert being given as type of both. *Chalcococcyx* was proposed by Cabanis (Mus. Hein., Vol. IV., p. 15, 1862) for the species *C. xanthorhynchus* Horsfield alone, and if any genus-splitting whatever has to be done, that species cannot be classed with the Austral-Malayan Bronze Cuckoos.

North was quite right in using *Lamprococcyx* for the Australian Shining Cuckoos, but if it is necessary to use generic names for small natural groups then the *basalis* group should also be differentiated. I therefore propose

NEOCHALCITES

for this genus of Shining Cuckoos, and name *C. basalis mellori*, subsp n., as type.

I consider that all the preceding Bronze Cuckoos should be regarded as constituting one genus, viewing genera as being based on structural characters. As however, at the present time, it seems to be the rule to recognise colour-genera I herewith offer some observations on the plumages of these Bronze Cuckoo group types:

Chrysococcyx smaragdineus (Swainson), the type of *Chrysococcyx* Boie, has the adult male brilliant green above, the feathers having a most beautiful metallic scale-like appearance, which suggested Reichenow's generic name of *Metallococcyx*. This is also the colour and nature of the throat and upper-breast, while the lower-breast and abdomen are uniform cream-colour. The adult female lacks the brilliant upper-surface coloration, being dull green, and has all the under-surface

whitish, heavily cross-barred with short, narrow, green bars. This is the plumage of the young.

Chrysococcyx cupreus (Boddaert), the type of *Lampromorpha* Vigors, has the adult male bronze-green above and the under surface pure white save for a few green crossbars on the abdomen and under tail-coverts. The adult female has the throat and upper-breast heavily spotted and the abdomen cross-barred with dull green, while the upper-surface is duller. The young have the dull upper-surface of the female and the throat and upper-breast spotted, while the abdomen barring is not so pronounced.

Chrysococcyx xanthorhynchus (Horsfield), the type of *Chalcococcyx* Cabanis, has the adult male brilliant purple above, the throat and upper-breast of the same colour, the lower-breast and abdomen white with purple cross-bars. The bill is horn-white and consequently a most striking feature. The adult female is dull bronze-green above, closely cross-barred underneath from chin to vent with dull green bars, and this is also the plumage of the young.

Chrysococcyx lucidus (Gmelin), the type of *Lamprococcyx* Cabanis, has the sexes alike, brilliant bronze-green above and closely cross-barred from chin to vent underneath with bronze-green bars. I have not seen very juvenile specimens of this species, but other writers conclude they are similar to the adult.

Chrysococcyx basalis mellori subsp. n., the type of *Neochalcites*, has the sexes alike; the upper-surface has only a bronze sheen, while the throat is indistinctly striped longitudinally with dull green, the breast and abdomen barred with distant dull green bars. The young, when they leave the nest, have little of the bronze upper-coloration above, but have the under-surface *unspotted* and *unbarred*. This must certainly justify the separation of these birds, under the generic *Neochalcites*, if colour-genera are recognisable. As, at the present time, I only use genera based on structural characters, I can do no

other than refer all these Austral-Malayan species to *Chrysococcyx*.

The genus *Eudynamys* I use for the Koel as almost universally admitted, but I am not sure as to its having priority over *Dynamene*. I am now working up this matter, and so far everything points to the latter being the correct name. The Tahitian Longtailed Cuckoo *E. taitensis* (Sparrman) has been placed in a genus *Urodynamis* by Salvadori (Orn. Papuasia e Mol., Vol. I., p. 370, 1880), but as this is admittedly only a colour-genus, I do not accept it. This bird is included in the Australian avifauna through its occurrence on Lord Howe and Norfolk Islands.

To treat now of the forms of Cuckoos inhabiting Australia in the order in which they appear in my Handlist :

Page 57. Species 404 is there called *Cuculus saturatus* Hodgson, which name was used to replace *Cuculus intermedius* Vahl. of the Cat. Birds Brit. Mus., Vol. XIX., p. 252. The races of *Cuculus canorus* Linné are difficult to determine, and as the material at my disposal does not warrant me in still accepting *C. saturatus*, from a study of the original description, I am reverting to the name proposed by Gould, *C. optatus*. A name, given by S. Muller, *C. canoroides*, may be applicable, but in the present uncertain state of the nomenclature of the species, I am using the name certainly available as it was given to the Australian form. Dr. Hartert is now working upon these puzzling birds for his Vögel der palaärktischen Fauna, and when the results of his studies are published I shall be able to make a more positive decision. I am tentatively referring to the Australian form as *Cuculus canorus optatus* Gould. In the Proc. Linn. Soc. N.S.W., Vol. II., p. 205, 1876, Ramsay notes that Diggles had described a *Cuculus brisbanensis* which from the description he identified as the young of *Cuculus optatus* Gould = *C. canoroides* Müller. The original description by Diggles I have been unable to trace, and I would be glad if anyone,

who has met with it would advise me when and where it was published.

In my Handlist, Species 405 is called *Cuculus inornatus* Vigors and Horsfield, following North's note on this subject in the Ibis (1906). Since then I have pointed out (Nov. Zool., Vol. XVIII., p. 16, 1911) that Latham's name of *C. pallidus* must be resumed.

With an extensive series in front of me I am able to recognise an Eastern and Western form, the name of the latter being *C. p. occidentalis* (Heine) (Mus. Hein., Vol. III., p. 27, 1862). Examination of this series points to two items of interest. From the dates I would conclude they only make short internal migrations, as I have them from the same district from August to March in the south and from May onwards in the north but have also specimens killed in May and July in the south-west. This is a matter which I would like to see Australian field-ornithologists take up, and by co-operation determine the times and routes of migration.

The other item is the plumage of the female. I had assumed, as most other writers have, that the adult female was like the adult male. I have not got a female in fully-adult male plumage, and all my apparently fully-adult breeding females have the upper-surface mottled to a greater or less extent : the head, nape, mantle, and wing-coverts may be described as dark brown, streaked with buffy-red—in one specimen, perhaps the most aged, the head is almost uniform : the under-surface is always indistinctly mottled towards the abdomen. From my series I can only conclude that the female is *never* absolutely uniform above and below, like the male.

This is the species for which Cabanis (Mus. Hein., IV., p. 26, 1862) proposed the genus *Heteroscenes*, and which Salvadori classed in *Cacomantis*, and Shelley in the genus *Cuculus*.

I have indicated (Nov. Zool., Vol. XVIII., p. 16, 1911) the rejection of *Cuculus flabelliformis* Latham as

regards the Australian *Cacomantis* group, and shown that *Sylvia rubricata* Latham was founded on the species at one time known by that specific name, and more recently, following North (Ibis, 1906, p. 53), as in my Handlist, by Vieillot's name of *C. rufulus*. In his latest work North has reverted to the old nomenclature, but that is certainly untenable. North writes: "Latham's descriptions of birds, only taken from drawings and without access to specimens, should be discarded, for it would be impossible to tell in many instances for what species they were intended, unless he had indicated to which they were applied in his General Synopsis of Birds."

This sentence deserves notice as it suggests the rejection of almost all the names given by Latham to Australian birds in the Supplement to the Index Orn. I have just jotted down the chief names and find that seventy of the best-known specific names are involved in this tremendous upheaval, and of course no further consideration can be given to such a proposition. It should also be remarked that the birds were fully described in English in the General Synopsis, and only a short Latin diagnosis based on that description given in the Index Orn. Supplement. From North's sentence given above this is not made clear, but almost the contrary suggested. To advocate the elimination of some seventy well-established specific names because there has been confusion concerning some half-dozen of them, seems rash, and I cannot understand the reasoning that produced such a proposition.

Examination of my own series proves this bird to be only a partial migrant and apparently local in its movements.

I find that the North Queensland birds differ from typical New South Wales birds in being smaller and darker in colour above and deeper below, and name this subspecies:

CUCULUS RUBRICATUS ATHERTONI, subsp. n.,

type no. 9333, Atherton, North Queensland.

On the other hand South-west Australian birds differ from typical New South Wales birds in being smaller: average wing measurement 138 against average wing measurement 144 mm.; also in being paler above and below. For these I propose the name—

CUCULUS RUBRICATUS ALBANI, subsp. n.,

type no. 1416, Albany, South-west Australia.

These differences are constant, and I have birds killed in every month of the year, but, as in the preceding case, co-operation must be used in order to define the migratory movements that take place.

In the Cat. Birds Brit. Mus., Vol. XIX., p. 266, 1891, *Cuculus pyrrophanus* Vieillot (Nouv. Dict. Hist. Nat., Vol. VIII., p. 234, 1817) is included in the synonymy of the preceding species, but a careful criticism shows it to refer to the species represented in East Australia by *C. variolosus* Vigors and Horsfield. Though it is stated in the original description to have come from Nouvelle Hollande, Pucheran (Rev. Mag. Zool., 1852, p. 560) stated that the birds were collected in Java. I am accepting this statement and retaining the Australian name *C. variolosus* for the Australian bird, but must use *C. pyrrophanus* as the species name. North has correctly pointed out that Gould's *C. insperatus* was given to a New South Wales specimen of this bird and therefore inapplicable to a New Guinea species as used by Shelley in the Cat. Birds Brit. Mus. North has, however, erred in suppressing Gould's *C. dumetorum* upon examination of a few specimens. He showed that Gould's measurements were all at fault, viz. 5 in. for the wing in one case and $6\frac{1}{2}$ in. in the other, though there is only the slightest difference in that measurement between the birds, according to North himself, one-tenth of an inch. It does not seem to be commonly known that as regards Australian birds, Gould apparently simply wrote down measurements approximately, and as far as I can judge, with many of Gould's specimens before me, without using a measure at all. It is well known

that different workers have had different methods of measurement, but I cannot in many instances reconcile Gould's figures in any manner with Gould's specimens.

Gould's *C. dumetorum* (Proc. Zool. Soc. [Lond.], 1845, p. 19) was given to a bird from Port Essington, and can be used for the North-west Australian bird. With many specimens before me it is an easily recognisable form. I have not seen any extra-Australian specimens which can be confused with either *C. dumetorum* or *C. variolosus*, therefore *C. tymbonomus* Müller can be neglected as far as Australian forms are concerned.

North's reasons for rejecting *C. palliolatus* Latham are sound, and it is interesting that Gould (Handb. B. Austr., Vol. I., p. 622, 1865) wrote: "That this bird (*C. osculans*) is not identical with the *Cuculus palliolatus* of Latham, as supposed by M.M. Cabanis, and Heine, is, in my opinion, quite certain; *Latham's description does not agree with it in any particular*" . . .

The italics are mine. Apparently this definite statement has been simply ignored but never refuted, as it is absolutely true.

Gould described his *Chalcites osculans* from the interior of New South Wales, and comparison of eastern specimens with a nice series from North-western Australia, shows the latter to be easily separable by their smaller size and paler coloration above and below. These I name:

OWENAVIS OSCULANS ROGERSI, subsp. n.,

type no. 8385, Parry's Creek, North-west Australia.

The species of *Chrysococcyx* are not so easily disposed of.

Cuculus basalis was described by Horsfield (Trans. Linn. Soc. [Lond], Vol. XIII., p. 179, 1821) from Java. This name has till recently been used for the Australian birds, but with the type, which is almost beyond comparison, and typical specimens before me, I am able to separate the Australian form, and moreover can indicate two forms as being confined to Australia. For the East Australian form, which differs from *Chrysococcyx basalis*

basalis in its darker upper-coloration and larger size, I propose the name :

CHRYSOCOCCYX BASALIS MELLORI, subsp. n.,

type no. 9683, Eyre's Peninsula, South Australia.

For the West Australian form, which can be separated from *C. b. mellori* by its smaller size and duller upper-coloration, and from *C. b. basalis* by being larger and darker, intermediate between the latter and *C. b. mellori*, I introduce the name :

CHRYSOCOCCYX BASALIS WYNDHAMI, subsp. n.,

type no. 8662, Point Torment, North-west Australia.

The wing measurements of these three sub-species are : *C. b. basalis* 90 ; *C. b. mellori* 107 ; *C. b. wyndhami*, 101 mm.

My series leads me to suggest that these birds only make internal migrations. A bird killed on November 4th at Parry's Creek is washed out, faded and sandy, looking exactly as if it had been living in a desert. On the head a few bronze feathers are showing, one or two on the wings and two new bronze tail-feathers are half-grown. A bird killed a week later has its plumage fully new bronze-coloured, exactly the same colour as in the new feathers in the former bird. Upon examination I found that birds killed in May in the same district were all in worn plumage, but not to the same state as the first-mentioned bird. I can consequently only conclude that these birds go inland from May to November, and that they moult into their spring plumage generally before returning to the coast.

North states that this species " is a permanent resident throughout the year in the neighbourhood of Sydney." It will be thus noted that this bird has probably different habits, as to migration, in different parts of Australia, and consequently there is a wide field for research in this respect.

Two points with regard to the nomenclature of this species require remark.

Temminck and Laugier in their Pl. Col. d'Ois., 17e livr., Vol. I., Pl. 102, Fig. 2, 1824, figured a bird which they named *Cuculus chalcites*, a MS. name of Illiger, with terra-typica L'Oceanie.

This bird is undoubtedly the young of this species but it is impossible to definitely apply it to any race. In order to finally dispose of this name I designate as type locality of *Cuculus chalcites* Temminck and Laugier, Java.

The other name is *Lamprococcyx modesta* Diggles. This is mentioned by Ramsay (Proc. Linn. Soc. N.S.W., Vol. II., p. 205, 1876) as known to him only by description and apparently given to the young of *L. basalis*. I have asked for information regarding *Cuculus brisbanensis* Diggles, and I suppose this was named at the same time.

Chrysococcyx lucidus (Gmelin) is the common Bronze Cuckoo of New Zealand, and has been recorded from the east coast of Australia.

North states that he has seen three specimens from Australia, one collected at Cape York and the other two, both adult females, from the neighbourhood of Sydney.

An account of this bird in New Zealand is given in the Emu, Vol. XI., 1911, and a footnote to p. 67 reads: "The expedition which the British Ornithologists' Union lately despatched to the Charles Louis Mountains, in Dutch New Guinea, will probably confirm this supposition.—J. McL." This refers to the wintering of *C. lucidus* in New Guinea. The B.O.U. Expedition did not meet with this species, and its winter quarters are not yet known.

A second footnote reads: "It possibly comes down the north-eastern coast of Australia, before diverging towards New Zealand. The Expedition of the R.A.O.U. observed these Bronze Cuckoos on the Capricorn Islands at the southern end of the Great Barrier Reef, October, 1910.—Emu, Vol. X., p. 197: Eds."

Through the kindness of Capt. S. A. White, I have been enabled to examine one of the specimens then

obtained, and there can be no doubt it is a genuine *C. lucidus*. I have another specimen with only Queensland as the locality, and these two are the only true *C. lucidus* I have seen from localities outside New Zealand. At the present time the wintering of *C. lucidus* is one of the puzzles of Australasian ornithology.

The bird from New Caledonia has been variously named *C. lucidus* and *C. plagosus*, by writers using the British Museum material. I have carefully examined this series and cannot agree with either of the above identifications.

Five specimens, three males and two females, killed in August, September, and November, all agree in their coloration. They resemble *C. plagosus* in their upper-coloration in having a purplish head, bronze-green upper-coloration—but the head is duller and the bronze-green is duller. The bill is long and thick, quite unlike that of *C. plagosus*. There is no white in front or above the eye and the ear-coverts are purple. As the throat is almost unbarred, the bird appears to have a distinct purple cap. The crossbarring of the under-surface is purplish-green and distinct, quite unlike the close bronze barring of *C. plagosus*. For this species I propose the name of:

CHRYSOCOCCYX LAYARDI, sp. n.,

type in the British Museum.

A specimen from the Solomon Islands (♂ September) agrees closely, but has the abdomen-barring more prominent. Another specimen from New Britain (♂ June) resembles this species, but has the head darker purple, the purple extending down on to the back, while the throat is crossbarred with purplish-brown and the abdomen has broad purple-bronze crossbars.

A specimen killed in New Caledonia (♂ 26.4.77) resembles *C. lucidus* in its upper-coloration, but has a narrower, shorter bill, and the under-surface is indistinctly marked with narrow, bronze bars closely set together, quite unlike any specimen of *C. lucidus* I have seen.

I suppose that this may be the immature plumage of *Chrysococcyx layardi*.

Whether *Cuculus plagosus* should be considered a subspecies of *Cuculus lucidus* or not, is a question I am at the moment unable to answer. At present I recognise three subspecies of *C. plagosus* as inhabiting Australia.

At various times *C. lucidus* has been recorded from Tasmania but Tasmanian specimens I have examined prove to belong to *C. plagosus*, but differ from the typical New South Wales form in having a much brighter bronze-green upper-coloration showing green on the head, therein approaching *C. lucidus*; but still the purple is evident, which is entirely missing in *C. lucidus*. The bill is moreover the bill of *C. plagosus*, not of *C. lucidus*. The barring on the under-surface is also much more close. For this form I propose the name of:

CHRYSOCOCCYX PLAGOSUS TASMANICUS, subsp. n.,

type no. 4633, Tasmania.

The West Australian specimens differ from typical *C. p. plagosus* in almost exactly the opposite manner, being duller above, much less bronze, and less barring underneath. I differentiate these as:

CHRYSOCOCCYX PLAGOSUS CARTERI, subsp. n.,

type no. 1465, Broome Hill, South-west Australia.
The migratory movements of the species from the East coast seem to be short, as I have them from most months in the year.

Sylvia versicolor Latham (Index Ornith. Suppl., p. LXI., 1801) has been included in the synonymy of this species, but examination of the type drawing reveals no reason whatever for such attachment and I reject it.

The little, and little known Austral-Malayan Bronze Cuckoos are very perplexing and I have to differ *in toto* with North's treatment of them. North recognises *L. malayanus* and in its synonymy includes *L. minutillus* Gould, and notes: "Captain Shelley includes Gould's types of *Lamprococcyx russatus* from Cape York

under Gray's name of *L. poecilurus*, but the only adult specimen in the Australian Museum collection from that locality has the forehead and feathers over and behind the eye with distinctly whitish mottlings, and is a typical *L. malayanus* . . . Moreover *Lamprococcyx russatus*, which Dr. Ramsay records from Cape York to Port Denison, is, I am sure, only the young bird of *L. malayanus* . . . Both specimens under this name in the Reference Collection are from Rockingham Bay, where *Lamprococcyx malayanus* is the common species." North concludes *L. malayanus* ranges from Port Essington to Port Denison, Queensland.

The type of *Cuculus malayanus* Raffles (Trans. Linn. Soc. [Lond.], Vol. XIII., p. 286, 1821) is not now in existence, but the description reads :

"This species has some affinity to the *C. lucidus*. It is about seven inches in length ; brown above, with a greenish gloss, particularly on the scapulars. The whole under-parts are transversely barred with white and brown undulations. The wings are long, extending to about the middle of the tail ; the coverts edged with ferruginous. The tail consists of ten feathers, of which the upper are greenish-brown, and the lower barred with brown, black and white. The bill is somewhat compressed at the base, and the nostrils are prominent. There is a row of white dots above the eyes.

"Native of the Malay Peninsula."

This description is not applicable to the birds Shelley included under this name in the Cat. Birds Brit. Mus., and certainly seems to have been drawn up from a specimen of *C. basalis* as Salvadori suggested. The upper-coloration as well as the lower-surface barring indicate that species, while the form of the bill is almost diagnostic of that species. The description of the tail does not mention any russet : but then Raffles was not an ornithologist, as can be seen from his method of describing the tail. *C. basalis* has a white stripe over the eye, which might appear in some skins like a row of white dots.

The Malayan birds included by Shelley are like *C. lucidus* Gmelin, but it must be remembered that when Raffles wrote all Bronze Cuckoos were more or less known as *C. lucidus*. Until very recent times the true *C. lucidus* Gmelin was not correctly known, so that Raffles's allusion to *C. lucidus* is of no value.

Shelley's *C. malayanus* have the upper-coloration deep green-bronze throughout and the inner webs whitish. By no means could they be identified with Raffles's *C. malayanus* and I suggest the acceptance of Salvadori's action and place this name with a " ? " in the synonymy of *C. basalis* Horsfield. In the Handl. Gen. Species Birds B.M., Pt. II., p. 218, 1870, Gray unhesitatingly included *malayanus* Raffles in the synonymy of *C. basalis* Horsfield, perhaps from examination of the type itself. At any rate, even if it were acceptable for the Malayan birds, it could not be used for Australian ones, as these differ altogether.

C. minutillus Gould approaches the Malayan birds described by Shelley in the Cat. Birds Brit. Mus., but differs in having little mottling on the forehead, more green coloration, and in its entirely different pattern of tail-coloration. In addition to the type, I have examined two specimens in my collection from Parry's Creek, North-west Australia, which agree generally, but have the upper-coloration darker green with the head tinged with purplish, and have much closer barring on the under-surface. Though I have criticised a series of these so-called *C. malayanus* from various of the East Indian Islands, I have seen none absolutely agreeing with these specimens. *C. minutillus* Gould, must be retained in the Australian List.

C. russatus Gould was described from Cape York, and I have examined three of Gould's specimens from that locality, marked as types, in the British Museum. These cannot be confused with *C. minutillus* in any way, inasmuch as they belong to the *basalis* group, while *C. minutillus* is referable to the *lucidus* group. There is

no russet on the tail of *C. minutillus* or the so-called *C. malayanus*, whereas *C. russatus* has every feather very russet, even more pronounced than in the tail of *C. basalis*.

Shelley's reference of *C. russatus* to *C. pœcilurus* Gray, was certainly near the mark, as the Cape York birds agree in the main with that species. They differ however in their lighter upper-coloration and in the under-surface having less barring, and in the presence of the russet on the sides of the neck. All the Cape York birds have this russet on the breast, in some cases extending across as a band, while in the type of *C. pœcilurus* and other specimens from near the type-locality which I refer to *C. pœcilurus* there is no indication of this russet coloration. At present I am unable to feel myself justified in referring *C. russatus* subspecifically to *C. pœcilurus*.

I am convinced that these Bronze Cuckoos are very local and do not perform long migrations, and here describe a new form from Dawson River, Queensland, which I cannot refer to any known species and have therefore to call it :

CHRYSOCOCCYX BARNARDI, sp. n.

General coloration above, pale green with little bronze coloration ; white eyebrow ; primaries dark brown ; under-surface white with narrow, green crossbars on the throat and wide bronze bars on the abdomen distant and separate ; inner-wing distantly barred. The outer tail-feathers have the outer web spotted alternately with white and brown, the inner alternately barred with black and white, the latter broader ; the next pair have the outer web uniform bronze-brown, the inner tipped with white followed by a large black spot, then a rusty bar, and this repeated ; the next pair have the same style of coloration, the white spot decreasing ; in the fourth pair the white spot is obsolete and the black diminishing, so that the russet predominates ; the central pair are uniform pale bronze-green.

The bill is very long and narrow, the exposed portion measuring 16 mm. Wing measurement of type 107 mm. Type no. 1464 ♂, Coomooboolaroo, Dawson River, Queensland.

This species differs from both the *C. plagosus* group and the *C. basalis* group. It approaches the latter in upper-coloration, but is entirely different in the under-surface barring; the throat is crossbarred whereas in *C. basalis* it is obscurely longitudinally streaked. It differs from the former in its general coloration and especially in its tail coloration.

As regards *Eudynamys* I find that the North-western birds are easily separable from the East coast ones by their smaller size, the average wing measurement of the former being 200 mm., of the latter 220 mm. This form I propose to call:

EUDYNAMYS ORIENTALIS SUBCYANOCEPHALUS, subsp. n., type no. 1470, Parry's Creek, North-west Australia.

To conclude, my nomenclature of Australian Cuckoos now reads—

	Handlist no.
Cuculus canorus optatus Gould - - -	404
,, *pallidus pallidus* Latham - -	405
,, ,, *occidentalis* Cabanis - -	405
,, *rubricatus rubricatus* Latham - -	406
,, ,, *athertoni* Mathews - -	406
,, ,, *albani* Mathews - -	406
,, *pyrrophanus variolosus* Vigors and Horsfield	407
,, ,, *dumetorum* Gould -	407
,, *castaneiventris* Gould - - -	408
Owenavis osculans osculans Gould - -	409
,, ,, *rogersi* Mathews - -	409
Chrysococcyx basalis mellori Mathews - -	410
,, ,, *wyndhami* Mathews -	410
,, *lucidus* Gmelin - - -	411